

EXECUTIVE SUMMARY

Envision srl is a company with focus in the field of energy efficiency and highly innovative technological services, whose mission is to contribute to the creation of value for its customers.

Problems and needs

Over half the world's population resides in urban areas and according to the UN, 68% of the world's population will live in major cities by 2050

(<https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>).

This expansion of population numbers in around cities in the European Union (EU) is accompanied by challenges related to sustainability

(https://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_European_cities),

such as freshwater scarcity, increased waste, traffic build-up and air pollution.

The Internet of Things (IoT) will play a key role in the functioning of smart cities and IoT-enabled smart city use cases span multiple areas: from contributing to a healthier environment and improving traffic to enhancing public safety and optimising street lighting.

On that, The trend of cities, from a green and eco-sustainable perspective, is unstoppable and the digitalization takes on a significant and distinctive importance (e.g. Next Generation EU).

The solution

Envision designs and develops infrastructures for Smart City and IoT, reliable, secure, resilient, paying attention to the circular economy.

Smart Infrastructures are managed by means of the *UrbanVision*, the software platform designed and provided by Envision, that coordinates, monitors and processes the collected data with advanced algorithms, even in Big Data mode, to offer innovative services to citizens and tourists.

Collected Big Data are processed through advanced algorithms. Data can be further integrated with open data and/or third parties.

Envision provides *end-to end solutions*, based on, audit&requirements analysis, smart city infrastructure design, digital services engineering, "smart" products supplied (light poles, benches, bus shelters, trash bins etc.), operation, design and innovative models, able to make the whole urban infrastructure be integrated, innovative and sustainable and get revenues through VAS services.

Main features: modularity, flexibility, scalability, easiness of installation.

Technology Readiness Level: 9.

The proposed solutions are based on easiness of installation; several type of sensors to integrate; ability of transforming every type of lighting poles and/or urban furniture keeping the aesthetic layout, as it is when it is required integration of all the infrastructures in the UrbanVision software platform.

The platform could support the following main functionalities:

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- wifi management;
- proximity marketing activities;
- videosurveillance, the videoanalysis with AI (intrusion detector, object detector, people counter, people direction controller, queue detector, license plate recognizer, parking space analyzer, traffic analyzer, vehicle counter);
- environment monitoring climate and quality of air);
- e-recharging system;
- adaptive street light remote control.

UrbanVision platform

The UrbanVision platform allows the development of services for the Smart City:

1. is the platform developed by Envision as a "single" tool for managing all services: with a single portal, in secure mode, it is possible to collect, manage and process in an integrated way all the data generated on the territory by Smart/IoT devices;
2. allows to offer innovative digital services from a Smart City perspective and to support the design and planning of the urban context;
3. support several business models.

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Platform objectives:

- Collect, manage and process data (Big Data) generated on the territory. Use forecasting models
- Integrate third party platforms / services and Smart Buildings
- Integrate urban security systems (video surveillance, access management, license plate reading, people counter, flows and more)
- Traffic monitoring, supporting sustainable mobility
- Support the functionality of health emergencies
- Monitor the environment, increasing awareness. Designing and delivering innovative and green digital services
- Propose tourism based on smart services.

The "UrbanVision" Smart City / IoT Platform is the core of Envision's proposal.

The presence on the territory of a Envision products allows for the creation of an advanced and innovative urban infrastructure, able to guarantee the diffusion of sensors and equipment on the territory (at low cost).

ENVISION overcomes the current fragmentation by combining extensive capabilities for diverse applications and smart city technologies and micro-generation of clean energy at a competitive price.

Intellectual property

ENVISION put a strong emphasis on protecting their IP through patents.

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Scenario

The core technology and methodology of ENVISION has potential for applications beyond the initial target market of smart city IoT network solutions, as the signature and nature of the ecosystem covers the entire IoT market use case.

Also, ENVISION solution was built from the ground-up for securing IoT devices and this has a huge potential in terms of scalability of the solution, thus opening new opportunity not just within the smart city market but also in other markets such as smart manufacturing, etc.

Some IoT gateways are designed for vertical usage in areas such as fleet management and other enterprise IoT environments or for IoT applications in areas such as asset management (remote monitoring) and across industries such as the process industry, manufacturing, etc.

Apart from this, the solution has applications in,

- The Global IoT in Intelligent Transportation Systems Market, which was valued at €99.4B in 2017 and is projected to reach €193.92B by 2025, growing at a CAGR of 8.7% from 2018 to 2025 .
- The global IoT for public safety market, which was valued at €750.5M in 2017 and is projected to reach €1.76B by 2023, at a Compound Annual Growth Rate (CAGR) of 15.9% during the forecast period.

The solution offers unlimited scalability across dozens of millions of connected devices. This has potential for the use of valuable data obtained through the protection of these devices, through the repository. This allows for the solution to be future proof protecting new IoT devices, applications and networks.

Envision's offer is the beginning of a radical digital transformation of urban areas, with benefits for city stakeholders (Local Administration, utilities, telco, end users ..).

At the end, as track record, several contracts/agreement in progress with Italian Municipality (<http://www.volkswagengroup.it/news/electrify-verona-installati-pali-intelligenti-per-la-ricarica-veloce.-i-primi-in-europa>, <http://www.rai.it/dl/RaiTV/programmi/media/ContentItem-782b56c3-4f5b-400b-aab4-627d3571646c-tg1.html>) and utilities. Business initiatives also on Mexico and Japan.

Best regards,

Envision s.r.l.

